

Appln. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

Arguments and Remarks

The applicant thanks the Examiner for considering this case.

The Examiner has not entered the substitute specification filed by the applicant on January 16, 2002 on the contention that the submitted specification does not conform to 37 C.F.R. 1.125(b) and (c), the Examiner indicating that a marked-up copy of the substitute specification has not been supplied. Applicant reminds the Examiner that the current requirements for providing a worked-up copy of the substitute specification under 37 C.F.R. 1.121 became effective in July of 2003. The Preliminary Amendment at issue in this case was filed in January of 2002. At the time the Preliminary Amendment was filed, marked-up copies of the specification and claims were submitted at the end of amendment documents. In reviewing its index of this case, the Applicant has discovered that pages 18-25 of the Preliminary Amendment properly included a marked-up version of the specification, under the heading "*THE FOLLOWING PAGES SHOW CHANGES MADE TO SPECIFICATION.*" in accordance with the requirements in place at the time the Preliminary Amendment was filed. A copy of the marked-up specification, as previously filed under Rule 121, is attached for the Examiner's reference, along with a copy of the confirmation postcard received from the USPTO following the submission of the Preliminary Amendment. Applicant therefore submits that the marked-up copy of the specification has already been submitted according to 37 C.F.R. 1.125 (b) and (c) and should therefore be added to the record accordingly.

Claim 17 has been amended to correct its previously incorrectly indicated claim number (1) to its correct number (17).

Claims 17-48 are currently in this case. The Examiner has rejected claims 17-20, 32-42, and 45-48. The Examiner has objected to claims 21-31 for being dependent on a rejected base

Appl. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

claim, but has indicated that the claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 43 and 44 have been allowed.

The Examiner has rejected claims 17-20 and 45-48 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,525,779 to Brown, Jr. ("Brown"), and further in view of U.S. Patent No. 4,135,497 to Meyers et al. ("Meyers"). The Examiner contends that Brown discloses a device having a casing with an opaque side, non-opaque side positioned to face the breast, thermooptical foil positioned between the casing and breast, camera, and illuminating system, but "does not disclose wherein a cooling box is mounted adjacent to the thermooptical foil to cool the foil to a constant temperature for a presettable amount of time when the foil is in contact with the breast." The Examiner further contends that Meyers discloses an apparatus that detects temperature variations for aiding early detection of malignant tissue in female breasts in which "film and the tissue are fan cooled for a relatively short period of time to produce a more sensitive color pattern on the film representative of the temperature variations," the Examiner then noting prescribed temperature ranges. The Examiner also notes that a cooling-down step disclosed in Meyers may be required to obtain images in the prescribed temperature range. Accordingly, the Examiner contends that it would have been obvious to mount a cooling box adjacent a thermooptical foil to cool the foil to a constant temperature for a presettable amount of time to produce a more sensitized color pattern on the film. The Examiner then suggests that Brown is concerned with controlling temperature and humidity in its chamber and therefore a cooling device would aid in this function.

Appl. No 10/018,131
Amendment dated July 6, 2004
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The applicant respectfully traverses this rejection. Neither the cooling operations nor the image recording operations disclosed in Brown or Meyers are appropriately analogous or comparable to applicant's disclosed cooling and image recording operations.

Applicant's invention includes a transparent cooling apparatus that contacts and cools the breast for a presettable amount of time, with a camera recording a resulting image on a thermooptical foil at the end of the presettable amount of time. The Examiner will note that Meyers describes a cooling operation for only *some* applications of its disclosed thermographic test in which the cooling step is effected by a presumably non-transparent, hand held cooling fan or blower that operates for a short ("approximately one minute") period of time. See Meyers at col. 7, lines 24-31, col. 8, lines 12-21. Moreover, the cooling fan or blower (64) of Meyers is apparently positioned a distance away from a breast and does not contact the film (18). See id. at FIG. 1. If conducted, this cooling operation, rather than produce an enhanced image, actually "serves to *remove* the color pattern initially produced on the film." See id. at col. 8, lines 15-16. Thus, unlike applicant's invention, an image is not recorded at the end of the cooling operation. Instead, Meyers recommends "that a period of 30 seconds be permitted to lapse after the cooling source is removed" for producing a sensitive color pattern. See id. at col. 8, lines 16-19. Only then, after this time lapse, is the image re-observed by a physician or patient. See id. at col. 8, lines 18-20.

The Examiner correctly observes that the device (10) disclosed by Brown is supplied with "temperature and humidity controlled air" that is supplied to the internal portion (chamber 20) of the device through a [first] tube (36) and exhausted with a [second] tube (37) to "aid in controlling the temperature of the air within the chamber 20" of the device, though Brown, unlike applicant's invention, does not disclose a separate and transparent cooling apparatus. See

Appln. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

Brown at col. 6, lines 29-34. In Brown, "temperature and humidity controlled air is supplied on a generally continuous basis," and unlike applicant's invention, Brown does not specify or suggest that an image must be recorded at the end of a specified cooling interval or at any specific time with respect to the time that cooling begins or ends. Meyers similarly lacks such an indication, and for this reason, the applicant submits that Brown, when taken in view of Meyers, in fact teaches away from applicant's invention.

The Examiner will note that an important purpose of applicant's invention is to allow for the standardization of recording conditions or "settings," such as cooling temperature and the duration of the cooling period, that are reproducible for subsequent or comparative testing. Rather than provide for the standardization of testing conditions by requiring that an image be recorded after a presettable amount of time has passed, both Brown and Meyers allow an image to be viewed by a practitioner and evaluated even before the decision of whether to produce a permanent record of the image is made, presumably allowing the thermally generated image to continue to change and thereby destroying the time-based standardization of any subsequently recorded image. Brown specifically provides a pair of handle grips (13) for operating a triggering mechanism (25) that the practitioner can use to produce a permanent record, only after viewing a separate "color display discernible by [the] practitioner 12," only "if [the] practitioner 12 decides that a permanent record is required." See Brown at col. 5, lines 4-10. As noted above, in the cooling operation disclosed by Meyers, it is recommended that a period of 30 seconds be permitted to lapse after the cooling source is removed for producing a sensitive color pattern before the image is re-observed by a physician or patient. The physician or patient using the Meyers apparatus or method would presumably record an image using the camera (60) no sooner than at the end of the 30 second interval following the removal of the cooling source.

Appln. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

Since neither Brown nor Meyers appear to require the recording of an image at a precise recording time, it would appear that both references, when taken together, teach that a recording time is inconsequential. The applicant further notes the absence of a transparent cooling apparatus in either reference. Applicant therefore submits that the Examiner makes an improper logical jump in concluding that the references together would make obvious the mounting of a cooling box adjacent the thermooptical foil to cool the foil to a constant temperature for a presettable amount of time when the foil is in contact with the breast. Such a logical jump could only be made in hindsight. Respectfully, the applicant reminds the Examiner that the U.S. Court of Appeals for the Federal Circuit has cautioned against the use of hindsight to piece together elements of a new combination:

As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); *see also Richdel, Inc., v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc., v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

In re: Roufet, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1457-58 (Fed. Cir. 1998).

The applicant's approach of standardizing recording conditions by standardizing the amount of time that is allowed to pass before an image is recorded is simply not addressed or suggested by either Brown or Meyers. Even if one or both of these references were to specify

Appl. No 10/018,131
Amendment dated July 6, 2004
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that an image be recorded at the end of a cooling interval, the fact that neither reference teaches that the standardization of that interval leads to standardized testing conditions would preclude the Examiner from sustaining such a rejection under § 103 (a). See id.

The Examiner has rejected claims 32 and 33 under 35 U.S.C § 103(a) as being unpatentable over Brown, in view of Meyers, and in further view of U.S. Patent No. 4,599,738 to Panetta ("Panetta"). The Examiner contends that Brown in view of Meyers discloses a casing having at least one opaque side and a non-opaque side, where the non-opaque side faces the breast. The Examiner further contends that Panetta discloses a mammography compression system wherein the breast examination support unit can achieve mobility that is similar to the variable positioning achievable with the multi-articulation arm disclosed in applicant's invention. The Examiner also contends it would have been obvious to disclose mounting the casing of the invention on such a multi-articulation arm on an instrument trolley due to the disclosed arrangement of Panetta.

The applicant, in view of Meyers, concedes that Brown discloses an apparatus having both an opaque and non-opaque side and further concedes that Panetta discloses both a multi-articulation arm and trolley that fall within the meaning of the terms "multi-articulation arm" and "trolley" in claims 32 and 33. Applicant submits that both claims 32 and 33 are dependent on and therefore narrower than claim 20, which has yet to be allowed but which applicant believes is now in a condition for allowance, and therefore concedes that the determination of whether claims 32 and 33 are allowable currently depends on the allowability of claim 20. Applicant notes that Panetta does not disclose a system that falls within the scope of claim 20, and that accordingly, the system of Panetta does not fall within the scope of claims 32 or 33.

Appln. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

The Examiner has rejected claims 34-42 under 35 U.S.C. § 103(a) as being unpatentable over Brown, in view of Meyers, and in further view of U.S. Patent No. 5,837,197 to Porrazzo et al. ("Porrazzo").

The Examiner contends that Brown in view of Meyers discloses a camera mounted to record from within the casing a thermooptical image and an illuminating system for illuminating foil within the casing. The Examiner further contends that Porrazzo discloses a miniaturized digital camera with a computer control board and memory system for a fertility analysis and reproductive health system, the system having the capabilities of storing images for later observation and printing, automatically recording and updating a daily chart of a woman's health status, providing telecommunications to third parties for digital transmissions and third opinions, input/output means for downloading data for database construction and comparison, and an interface allowing digital images to be displayed on a video display terminal or similar device. The Examiner further contends that it would have been obvious to disclose wherein the thermooptical image further comprises a digital camera connected to a monitor screen with a plurality of windows, a computer for processing and operating the apparatus, a storage medium for storing digital images, a printer output device, and an image evaluating device for looking at pathological changes, structures, and reference images.

The applicant concedes that each of the above-listed capabilities of the system of Porrazzo could be adapted for use with applicant's invention. However, applicant submits that claims 34-42 are dependent on and therefore narrower than claim 20, which has yet to be allowed but which applicant believes is now in a condition for allowance, and therefore concedes that the determination of whether claims 34-42 are allowable currently depends on the allowability of claim 20. The applicant notes that Porrazzo does not disclose a system within the

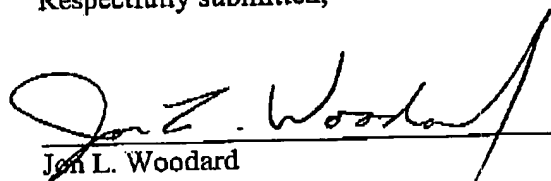
Appln. No 10/018,131
Amendment dated July 6, 2004
Reply to Office Action dated March 10, 2004

scope of claim 20, and that accordingly, the system of Porrazzo does not fall within the scope of any of claims 34-42.

In view of the foregoing, the applicant submits that the substitute specification is now acceptable for entry and further submits that claims 17-42 and 45-48 are now in a condition for allowance. Review and allowance of the pending claims is requested.

Respectfully submitted,

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